



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

646.3013
Job Sheet 170449



Part No: 646.3013

Job Qty: 12 ea

Part Name: Blade



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/16/18

Job Tracking No:

Due Date: 2/2/18

Created By: Linda Lacelle

Type: SOLD

Description:

Note: DWG REV N/C SHEET 10 IPP REV:A NEW ISSUE 12/11/09 JFS VERIFY BY: JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	12 Ea		2/2/18	0.00	0.00	Start Up Machining-1		
100	Bandsaw	12 pcs		2/2/18	0.00	0.21	Bandsaw1		
110	CNC Vertical Machining	12 pcs		2/2/18	0.13	10.85	HAAS1-1		
120	QC	12 pcs		2/2/18	0.00	0.00	QC2 Machining-1		
130	QC	12 pcs		2/2/18	0.00	0.00	QC8 Machining-1		
140	Outsource	12 pcs		2/2/18	0.00	0.00	Outsource1	39181	
150	Packaging	12 pcs		2/2/18	0.00	0.00	Packaging2		
155	QC	12 pcs		2/2/18	0.00	0.00	QC5		
160	SprayPaint	12 pcs		2/2/18	0.00	0.46	Spray Paint		
170	QC	12 pcs		2/2/18	0.00	0.00	QC14		
180	Packaging	12 pcs		2/2/18	0.00	0.00	Packaging3-1		
190	QC21-SA	12 Ea		2/2/18	0.00	0.00	QC21		

Part Op 100 - Cut Blank at 4.930"

Descriptions: 110 - 1-Machine per folio FB150 2- deburr and break all sharp edges except otherwise noted KNIFE EDGE MUST BE SHARPENED USING STONE, REMOVE ALL BURRS ON CUTTING EDGE

140 - HEAT TREAT AS PER DWG, SEE NOTE #3 ISSUE P/O:

160 - PRIME AS PER DWG, SEE NOTE #4 PRIMER BATCH: 138747

180 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	MSTEEL-A2-B0.500X1.250	5	79	0	0

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐
Date : _____	Step #: _____	QTY Effective _____
Description Work Order Deviation		
Root Cause		
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐
Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/L ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/ ☐ Drill Holes ☐		
OTHER : _____		

Date: 02/17/18
 Inspector: _____
 Revision: 646.3000
 Job No: 170449
 Part: 646.3013
 Serial No/Batch: 8043489
 Container No: 8043489
 DART Aerospace Ltd.
 1270 Aberdeen Street
 Newbury, ON K5A 1K7
 CANADA
 TEL: 1 813 632-8200
 Email: sales@dartaero.com
 www.dartaero.com
 Turning Sequence
 Misaligned/Off Center

Part Specifications					
Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Blade	0.375inches $\pm$ 0.005	0.380 0.370		
2	Blade	66.500Degrees $\pm$ 0.500	67.000 66.000	Angle	
3	Blade	0.177inches $\pm$ 0.005 - 0.001	0.182 0.176	Diameter	
4	Blade	4.800inches $\pm$ 0.010 - 0.001	4.810 4.799		
5	Blade	4.396inches $\pm$ 0.005	4.401 4.391		
6	Blade	0.576inches $\pm$ 0.005	0.581 0.571		
7	Blade	45.000Degrees $\pm$ 0.500	45.500 44.500	Angle	
8	Blade	0.635inches $\pm$ 0.002	0.637 0.633		
9	Blade	1.109inches $\pm$ 0.002	1.111 1.107		
10	Blade	0.240inches $\pm$ 0.002	0.242 0.238		
11	Blade	0.576inches $\pm$ 0.005	0.581 0.571		
12	Blade	0.940inches $\pm$ 0.010	0.950 0.930		
13	Blade	0.125inches $\pm$ 0.005	0.130 0.120	Radius	
14	Blade	60.000Degrees $\pm$ 0.500	60.500 59.500	Angle	
15	Blade	0.325inches $\pm$ 0.005	0.330 0.320		
16	Blade	30.000Degrees $\pm$ 0.000	30.000 30.000	Angle	

Plex 1/16/18 1:26 PM dart.lacelle.linda

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

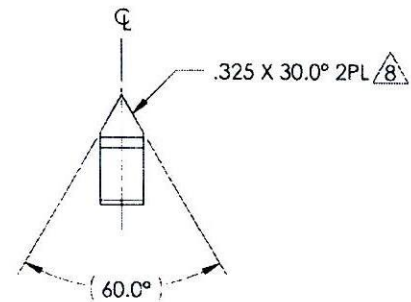
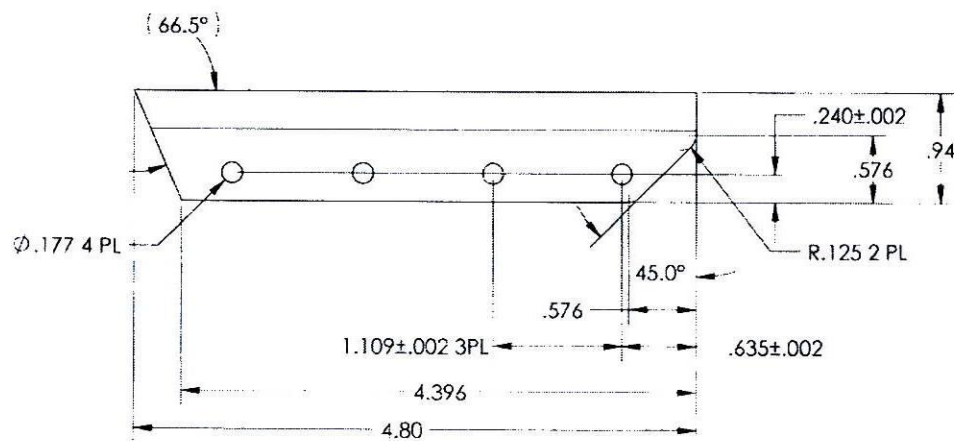
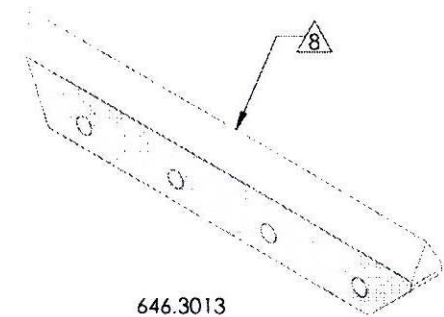


QA Closed: _____ Date: _____

Work Order update only ☐

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DRAWN BY: [blank] CHECKED BY: [blank] DESIGNED BY: [blank] DATE: [blank] SCALE: [blank]		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760) 774-5330	
PARTS COMPANY: [blank] PARTS NAME: [blank] PARTS NUMBER: [blank] PARTS DESCRIPTION: [blank]		LOWER CUTTER ASSY SEE PARTS LIST FOR MATERIALS B 07/24/06	
PARTS NUMBER: 646.3000 PARTS DESCRIPTION: [blank]		DATE: 07/24/06 BY: [blank]	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO039181

Supplier: MEI001-VC
Metcor Inc.
560 Boul. Arthur Sauve
Saint-Eustache
QC
J7R 5A8 Canada
Phone: 450 473 1884
Fax: 450 491 5498

PO No: PO039181
PO Date: 3/2/18
Due Date: 3/20/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lacelle, Linda
Phone: llacelle@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pynt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	171547	D2741	Replacement Blade Issue P/O: HARDEN MATERIAL: ULTIMATE TENSILE STRENGTH = 152 KSI MINIMUM YIELD TENSILE STENGHT = 141 KSI (34-40 HRC) SAND BLAST PART AFTER HEAT TREAT \ NOTE: DO NOT OIL AFTER SANDBLAST NOTE: DETAIL C OF C REQUIRED	Firmed	3/27/18	38 pcs	0 pcs	38 pcs	\$18.0152632/pcs	\$684.58
Line Item Note part made from 4130 bar										
2		646.3013	Blade ISSUE P/O: FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS As Per Dwg 646.3000 PART ARE MADE FROM AISI A2 TOOL STEEL	Firmed	3/20/18	12 pcs	0 pcs 12x	12 pcs AT 18/03/20	\$2.2977/pcs	\$27.57

DAS
38
9-89

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
325893	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
PO039181	N/A	A2		
SPECIFICATIONS DU PROCÉDÉ processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPECIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	58 - 62 HRC	8	58 - 61 HRC	

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ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

1

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
138	45	646.3013 (12) 646.3013 DWG 646.3000 (12) 646.3014 DWG 646.3000 (12) 646.3015 JOB 170451 DWG 646.3000 (12) 646.3314 JOB 170459 DWG 646.3300 (12) 646.3315 JOB 170460 DWG 646.3300 (12) 646.3316 DWG 646.3300 (44) D5504-1 171646 (20) D5557-1 171467 2= 1BC + 1 VALISE

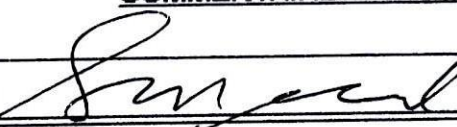
DAB
38
9-88

APPROUVÉ

16/3/18

COMMENTAIRES / comments

APPROUVÉ par / Approved by:



METCOR
7

DATE: 2018-03-12